

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently Amended) A method for laser microdissection of specimen regions [[(23)]] of interest of a specimen [[(4)]] that is mounted on a specimen holder [[(3)]], characterized by the following steps comprising:

a) cutting, with a focused laser beam [[(7)]] having a defined cut width, along an incomplete cut line [[(25)]] largely enclosing the specimen region [[(23)]] of interest, such that there remains between [[the]] a beginning and end of the cut line [[(25)]] a stable web [[(26)]] of defined width by way of which the specimen region [[(23)]] of interest is joined to the surrounding specimen [[(4)]]; and

b) severing the web [[(26)]] with a laser pulse, directed onto the web [[(26)]], of a focused laser beam [[(7)]] having [[a]] an enlarged cut width enlarged as compared to the previous cutting said defined cut width.

2. (Currently Amended) The method as defined in Claim 1, wherein the defined cut width during cutting is much narrower than the enlarged cut width of the laser beam (7) when severing the web (26).

3. (Currently Amended) The method as defined in Claim 1, wherein the defined cut width during cutting is generated by attenuating [[the]] a laser intensity as compared to [[the]] a laser intensity when severing the web [[(26)]].

4. (Currently Amended) The method as defined in Claim 1, wherein the enlarged cut width of the laser beam (7) when severing the web (26) corresponds at least to [[the]] a width of the web [[(26)]].

5. (Currently Amended) The method as defined in Claim 1, wherein the laser pulse is directed onto the center of the web [[(26)]].

6. (Currently Amended) An apparatus for laser cutting of microscopic specimens [[(4)]], comprising:

a microscope (1) having configured for viewing of a specimen having a specimen region of interest, comprising: at least one objective [[(9)]] that defines an optical axis, (10), ~~for viewing of a specimen (4) having a specimen region (23) of interest, and having a laser [[(6)]] that generates a laser beam [[(7)]] and at least one optical system [[(13)]] that couples the laser beam [[(7)]] into the objective [[(9)]]], wherein~~

a) a cut line control unit [[(2; 31)]] is associated with the microscope (1) ~~in order and configured~~ to generate a relative movement between the laser beam [[(7)]] and the specimen [[(4)]] to achieve an incomplete cut line [[(25)]] largely enclosing the specimen region [[(23)]] of interest, such that there remains between [[the]] a beginning and end of the cut line [[(25)]] a stable web [[(26)]] of defined width by way of which the specimen region [[(23)]] of interest is joined to the surrounding specimen [[(4)]]; and

b) means for severing the web [[(26)]], with which [[the]] a cut width of the laser beam [[(7)]] is enlarged and a single focused laser pulse is directed onto the web [[(26)]] and severs the web [[(26)]], are provided.

7. (Currently Amended) The apparatus as defined in Claim 6, wherein the laser beam [[(7)]] is stationary and the cut line control unit comprises a displaceable X-Y stage [[(2)]] which moves the specimen [[(4)]] relative to the stationary laser beam [[(7)]] during cutting.

8. (Currently Amended) The apparatus as defined in Claim 6, wherein the cut line control unit comprises a laser scanning device [[(31)]] which moves the laser beam [[(7)]] relative to a stationary specimen [[(4)]] during cutting.

9. (Currently Amended) The apparatus as defined in Claim 6, wherein a laser control unit which controls [[the]] operating parameters of the laser [[(6)]] is associated with the laser [[(6)]].

10. (Currently Amended) The apparatus as defined in Claim 6, wherein an autofocus apparatus for the laser beam [[(7)]] is associated with the laser [[(6)]].

11. (Currently Amended) The apparatus as defined in Claim 9, wherein a computer [[(16)]] for controlling the cut line control unit [[(2; 31)]] and the laser control unit is associated with the microscope.

12. (Currently Amended) The apparatus as defined in Claim 6, wherein means for automatic enlargement of the cut width of the laser beam [[(7)]] and for automatic execution of a single laser pulse, directed onto the web [[(26)]] with that cut width, are associated with the microscope.

13. (Currently Amended) The apparatus as defined in Claim 6, wherein means for selection of the cut line [[(25)]] by a user are provided.

14. (Currently Amended) The apparatus as defined in Claim 6, wherein means for selection of the defined width of the web [[(26)]] by a user are provided.

15. (Currently Amended) The apparatus as defined in Claim 6, wherein means for selection of the location of the web [[(16)]] by a user are provided.

16. (Previously Presented) A method for laser microdissection of a specimen region of interest of a specimen, comprising:

(a) cutting with a laser beam along an incomplete cut line such that there remains a stable web by way of which the specimen region of interest is joined to the surrounding specimen; and

(b) severing the web with a laser pulse, directed onto the web, of a laser beam.

17. (Previously Presented) A method as set forth in claim 16, wherein step (b) comprises severing the web with a single laser pulse.

18. (Previously Presented) A method as set forth in claim 16, wherein step (a) comprises cutting with a focused laser beam and step (b) comprises severing the web with a laser pulse of a focused laser beam.

19. (Previously Presented) A method as set forth in claim 16, wherein step (b) comprises severing the web with a laser pulse of a laser beam having a cut width enlarged as compared to step (a).

20. (Previously Presented) A method as set forth in claim 16, wherein in step (a) there remains only one stable web.

21. (Previously Presented) A method as set forth in claim 20, wherein the only one stable web remains between the beginning and end of a cut line.

22. (Previously Presented) A method as set forth in claim 16, wherein the incomplete cut line largely encloses the specimen region of interest.

23. (Previously Presented) A computer readable storage medium containing instructions to perform the method of claim 16.

24. (Previously Presented) An apparatus for laser cutting of microscopic specimens comprising:

a microscope having at least one objective that defines an optical axis, for viewing of a specimen having a specimen region of interest;

a laser that generates a laser beam and at least one optical system that couples the laser beam into the objective; and

a control unit associated with the microscope which generates a relative movement between the laser beam and the specimen to achieve an incomplete cut line such that there remains a stable web by way of which the specimen region of interest is joined to the surrounding specimen, and to sever the web with a laser pulse directed onto the web.

25. (Previously Presented) An apparatus as set forth in claim 24, wherein the control unit severs the web with a single laser pulse.

26. (Previously Presented) An apparatus as set forth in claim 24, wherein the incomplete cut line is formed by a focused laser beam and the web is severed using a focused laser beam.

27. (Previously Presented) An apparatus as set forth in claim 24, wherein the web is severed with a laser pulse of a laser beam having a cut width enlarged as compared to a cut width used to achieve the incomplete cut line.

28. (Previously Presented) An apparatus as set forth in claim 24, wherein after the incomplete cut line is achieved there remains only one stable web.

29. (Previously Presented) An apparatus as set forth in claim 28, wherein the only one stable web remains between the beginning and end of a cut line.

30. (Previously Presented) An apparatus as set forth in claim 24, wherein the incomplete cut line largely encloses the specimen region of interest.

31. (Previously Presented) An apparatus as set forth in claim 24, wherein the microscope comprises an upright microscope.

32. (Previously Presented) An apparatus as set forth in claim 24, wherein the microscope comprises an inverted microscope.

33. (Previously Presented) An apparatus as set forth in claim 24, wherein the apparatus further comprises a displaceable X-Y stage.

34. (Previously Presented) An apparatus as set forth in claim 24, wherein the apparatus further comprises a laser scanning device.

35. (Previously Presented) An apparatus as set forth in claim 24, further comprising an autofocus apparatus.

36. (Currently Amended) An apparatus as set forth in claim 24, further comprising an input unit to receive an instruction from a user which designates [[a]] the cut line.

37. (Currently Amended) An apparatus as set forth in claim 24, further comprising an input unit to receive an instruction from a user which designates a width of [[a]] the web.

38. (Currently Amended) An apparatus as set forth in claim 24, further comprising an input unit to receive an instruction from a user which designates a location of [[a]] the web.

39. (Previously Presented) The method as defined in claim 1, wherein step b) comprises severing the web with a single laser pulse.